



DETAILED ACTION

10-811-799

ON SET

Specification

6-29-04

1. The abstract of the disclosure is objected to because of the language used, single spacing, and figure included. See MPEP § 608.01(b).
2. The spacing of the lines of the specification is such as to make reading and entry of amendments difficult. New application papers with lines double spaced on good quality paper are required.
3. The claims and specification are replete with errors and formatting problems. But the Examiner has found the applicant's claims to contain allowable subject matter. Therefore, the Examiner is providing the applicant with a new Specification, Abstract, and new Claims, in order to put the application in condition for allowance. The applicant should consider the following new papers presented, which include a new Abstract, Specification, and Claims. If the applicant is in agreement, then he should *submit exact copies of the following pages in his response*. If the applicant wants to make changes to anything the Examiner wrote, please make a notation as to what should be changed. Also, applicant is reminded to *submit replacement formal Drawings* making the necessary changes to comply with the Draftsman's objections and the Examiner's notations.

I am in full
agreement.
[Signature]

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I

Automobile Wheel and Track Snare

FIELD OF THE INVENTION

The invention relates to an apparatus to disable vehicles.

BACKGROUND OF THE INVENTION

Every year persons are killed in high-speed motor vehicle chases, such as when police are forced into chasing fleeing suspects. The victims of these high-speed chases include police officers, suspects, members of the public, and members of the military.

DESCRIPTION OF THE PRIOR ART

Various road barriers and tire piercing structure has been utilized in the prior art to prevent vehicles from fleeing the police. An example of a prior art tire piercing apparatus is in U.S. Pat. No. 4,473,948 to Chadwick, where a base plate includes a plurality of pins projecting upwards of the base plate to prevent an automobile from being driven. U.S. Pat. No. 4,382,714 to Hutchison invention is a vehicle-disabling device adapted to project a plurality of spike-like devices to puncture one or more tires of a fleeing vehicle. Such spike-like elements secured to bases by either a strand, cord, or short length of chain are evident in the prior art.

SUMMARY OF THE INVENTION

What is required is a method and apparatus that can be used to halt a suspect's motor vehicle in advance of a police chase, rendering a high-speed chase unnecessary.

whereby each loop engages a tire, creating a lasso effect, and forcing said plurality of barbs on said plates into the tires of the vehicle, causing the cable to wrap around the wheel and control arms, thereby using the vehicle's own power to generate the lasso effect to disable the vehicle's control arms and drive axles, and causing the wheels to seize and/or deflate.

4. (New) A method of engaging wheels of a moving vehicle and stopping the vehicle, the vehicle having tires with control arms and drive axles, the method comprising:

providing a plurality of 4 inch by 8 inch by 1/8 inch steel plates, said steel plates each having an upper surface and a lower surface,

mounting a plurality of barbs onto the upper surface of each said plate,

attaching a guide tube to the lower surface of each plate by welding,

threading a 0.5 inch diameter and 30 foot long wire rope through each of said guide tubes,

placing said wire rope having a plurality of said steel plates thereon onto a 10 foot long and 1 to 2 foot wide deployment board having a hinge in a central portion thereof,

laying said wire rope on said deployment board in a configuration having two sliding loops, one loop to engage each wheel, and removably fastening said wire rope onto said deployment board by a plurality of clips, and

placing said deployment board with attached said wire rope on a ground surface in front of a moving vehicle,

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In its preferred embodiment, the wheel and track snare consists of a folding deployment board, seen in Fig. 2, with a hinge in the middle. The board is about ten feet long and one or two feet wide, though the measurements can be approximated depending on the immediate requirements, since the device can be assembled in a very short time.

BRIEF DESCRIPTION OF THE DRAWINGS

Fig. 1 is a side view of the base plate.

Fig. 2 is a view of the deployment board with hinges for deployment in front of a fleeing vehicle.

Fig. 3 is a view of a device laid out in front of an approaching vehicle.

Fig. 4 is an isometric projection of a base plate with a sleeve for the cable, and screw-type barbs projecting from the plate.

Fig. 5 is a view showing a cable with loops coiling around the wheels' control arms and drive axles.

Fig. 6 is a view showing cable snare gripping a wheel of a vehicle.

Fig. 7 is a view of a vehicle tire on a spiked base plate to facilitate spike penetration.

Fig. 8 is a view of the cable snare locking onto the wheels of a vehicle.

Fig. 9 is a view of the base plates on a folding deployment board.

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Fig. 10 is a view of another embodiment for use with a tank, showing a snare cable entwined around a track and drive sprocket wheel using grappling hooks to disable the tank.

DESCRIPTION OF THE PREFERRED EMBODIMENT

The wheel and track snare apparatus is designed to quickly and effectively stop a moving vehicle (V) with rubber tires (T). In another embodiment shown in Figure 10, the snare can be used on a track-driven vehicle (TV), such as a tank. To facilitate disabling of a track-driven vehicle, the base plates (2) are equipped with grapping hooks (6).

The snare operates to harness the control arms and drive axles of the wheels of the vehicle (V), while piercing the tires (T) with barbs (1), in order to disable the vehicle (V). The snare consists of a folding deployment board (4) with a hinge (H) in the middle, as shown in Figures 2 and 9. A 30-foot long and 0.5-inch diameter wire rope or cable (3) is removably fastened onto the deployment board by a plurality of clips, in a configuration having two loops in order to engage each tire (T). The removable connection allows the cable (3) to separate from the deployment board (4) when struck by a moving vehicle (V). The wire rope (3) is threaded through a plurality of steel base plates (2), preferably 1/8 inch thick, by drawing the rope (3) through a guide tube (7) that is welded to the lower surface of each plate (2) as shown in Figures 1, 4, and 7. A wire rope or cable (3) is preferred to using a chain. Each steel base plate (2) is

equipped with four or five barbs (1) in a screw-type configuration that are mounted on a swivel collar to aid the turning of the barb (1) into the solid rubber of the tire (T). As the tires (T) of a vehicle (V) approach plates (2) as shown in Figure 3, the angle of the barbs (1) facilitate direct piercing into the tires (T) while the cable (3) surrounds the tires (T). The cable (3) is fashioned with a sliding noose, as shown in Figures 4, 5, 6, 8, and 9. The base plates (2) with the barbs (1) are forced into the tire (T) of the moving vehicle (V) causing the cable (3) to wrap around the control arms and drive axles of the wheels, as illustrated in Figures 5 and 6. This action of using the vehicle's own power generated by the spinning tires (T) creates a lasso-effect, causing the noose to tighten as shown in Figure 5, thereby disabling the vehicle's control arms and drive axles and causing the wheels to seize.